

**On the Rearing of *Microchridium minutum* and Its Probable
Host—*Ammoplanellus (Ammoplanellus) umatilla*
(Hymenoptera: Chrysididae, Sphecidae)**

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Abstract.—Rearing information for *Microchridium minutum* and *Ammoplanellus* subg. *Ammoplanellus umatilla* from old *Andricus quercuscalifornicus* (Cynipidae) galls on valley oak is presented. The probable parasite-host relationship between *M. minutum* and *A. umatilla* is noted.

During a study of insects inhabiting old *Andricus quercuscalifornicus* (Bassett) galls (Hymenoptera: Cynipidae), more commonly referred to as “oak apples,” fourteen specimens of *Ammoplanellus* subg. *Ammoplanellus umatilla* Pate and a female specimen of the monotypic *Microchridium minutum* Bohart were reared. The purpose of this paper is to present this rearing information and to note the probable parasite-host association between *M. minutum* and *A. umatilla*.

The wasps emerged from 250 *A. quercuscalifornicus* galls which were collected from a large, isolated valley oak (*Quercus lobata* Nee) in a residential backyard located at 4557 East Dakota, Fresno, Fresno County, California. The galls ranged from 2.5 to 10 cm (1 to 4 inches) in diameter, most possessed a few to many insect emergence holes of various sizes, and were located at a height of 2 to 3.3 m (6 to 10 feet) upon branches near the trunk of the oak. The galls were collected on 18 January 1982 and held outdoors in a sealed cardboard box until 27 December 1982, then the box was opened and examined for insects that failed to emerge. The *Microchridium minutum*, named so because of its small size (about 2 mm), and *A. umatilla* (about 3 mm) were dead lying amongst the galls on the bottom of the box. This data represents the first rearing records for both *M. minutum* and *A. umatilla*.

Bohart and Kimsey (1980) indicated the habitat of *minutum* as desert areas of Arizona and California. However, it was also recorded from Nebraska, Nevada, and Baja California, Mexico and thought possibly to be widespread west of the 100th meridian (Bohart 1980, Bohart and Kimsey 1982). The only biological information for *minutum* involves collection data on mats of *Euphorbia* (Bohart and Kimsey 1982).

No biological information is recorded for the five North American species of *Ammoplanellus*, though Pate (1945) proposed that the two species in the subgenus *Ammoplanellus* may nest in pre-existing holes or crannies and provision their burrows with Thysanoptera (thrips) as do *Ammoplanus*.

Over 40 years ago, Pate (1945) noted an undescribed genus of minute chrysidid

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wasp that was flying about holes in a chair from which *Hesperorhipis mirabilis* Knull (Coleoptera: Buprestidae) had emerged. Many *A. xila* Pate were also flying about these holes and presumably were nesting within the buprestid burrows. Though no specimens were reared, the observer indicated that the chrysidid was possibly a parasite of *A. xila*. This chrysidid was not described because the specimen Pate received was in poor condition (Pate 1939), but it is possible that it was a specimen of the recently described *M. minutum*.

It is postulated that *A. umatilla* nests in old *A. quercuscalifornicus* galls in pre-existing holes and *M. minutum* enters active nesting holes to parasitize it. Additional rearing and observation will be needed to substantiate this association.

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